

## **REMARKS / ARGUMENTS**

The action by the Examiner in this application, together with the reference cited, has been given careful consideration. Following such consideration, claims 1, 5 and 6 have been amended to address the Section 112 rejection raised by the Examiner. The Examiner's suggestion with respect to claim language to overcome this rejection is appreciated. The remaining claims are unchanged. It is respectfully requested that the Examiner reconsider the claims in their present form, together with the following comments and allow the application.

As the Examiner well knows, the present invention is directed to an article conveying apparatus for conveying articles between article storage sections. A problem with prior article conveying apparatus is that the raising and lowering cables are guided along the vertical support masts. In this position, the raising and lowering cables might possibly be swung into engagement with the masts and interfere therewith when the stacker crane is moved between article storage locations. To avoid the raising and lowering cables interfering with the vertical supports, tension on the raising and lowering cables must be increased to take up any "slack" or "play" in the cables. As will be appreciated, the increased tension in the cables requires a more rigid chain-tensioning device. In addition, because of the greater tension in the cables, a more expensive, higher-strength cable must be used to withstand the higher tension.

The present invention overcomes these problems by moving the raising and lowering cables away from the support masts to a vicinity of a central portion of the truck body. The cables are guided vertically from the central portion of the truck body to a tension setting device disposed on the *underside* of the platform. Each of the cables is connected in a vicinity of a

central lower portion of the platform. As a result of this arrangement, the returning portions of the raising and lowering cables are disposed away from the raising and lowering masts. This prevents the returning portions of the raising and lowering cables from interfering with the raising and lowering masts. The tension on the raising and lowering cable need only be sufficient to prevent separation, i.e., disengagement, of the cable from the winding sprockets. As a result, it is possible to reduce the burden, i.e., the tension on the raising and lowering cables, thereby enabling use of a less rigid tensioning device and possibly the use of a lighter weight, i.e., lower strength, cable. As a result, the overall cost of the assembly is reduced.

The Examiner has rejected the claims under 35 U.S.C. Section 103(a) as being unpatentable over Japanese Application Publication No. H2-18403. Unlike the present invention where the tension setting device is provided on the underside of the platform, Japanese Publication No. H2-18403 discloses a tension setting device on a front or rear side end of an upper part of the platform. In this position, an article to be transferred is more likely to contact the tension setting device when placed on the transfer device. As a result, the size of the articles that can be placed on the platform are limited. Moreover, the configuration of H2-18403 positions the raising and lowering cables along side the raising and lowering poles. The present invention is completely unlike the Japanese Publication in that with the present invention, a pair of raising and lowering cables are guided to a vicinity of a central portion of said running truck body between the front side end and the rear side end thereof. Moreover, the cables are guided vertically from the vicinity of the central portion of the running truck body between the front side end and the rear side end of the running truck body to a vicinity of a central lower portion of the

platform between the front side end and the rear side end of the platform. The cited reference does not teach, suggest or show the invention as claimed.

The Examiner takes the position that the Applicant has merely rearranged parts. However, the repositioning of the tension setting device to the underside of the platform provides significant economic benefits. By rearranging the returning portion of the raising and lowering chain, i.e., cables, away from the front and rear raising and lowering masts, significantly less tension is required on the chain, i.e., cables. It is thus possible to reduce the burden on the raising and lowering chains as well as on the associated members. As a result, the structure of the chain tensioner can also be simplified thereby providing a simpler, less expensive mechanism.

Applicant therefore submits that the cited Japanese Publication does not teach, suggest or show the invention as presently claimed or the advantages thereof. The cited Japanese Publication No. H2-18403 does not teach, suggest or show moving the tensioning cables away from the support mast and the advantages attended thereto, and does not teach providing a tension setting device on the underside of the platform where it will not interfere with articles placed on the platform as does the structure in H2-18403.

Applicant respectfully submits that no new matter has been added to the claims and that the foregoing arguments and amendments to the claims do not necessitate an additional search. Favorable action is therefore respectfully requested.

U.S. Patent Application No. 10/796,508  
Amendment dated September 4, 2007  
RESPONSE TO FINAL OFFICE ACTION dated June 4, 2007

If there are any fees necessitated by the foregoing communication, please charge such fees to our Deposit Account No. 50-0537, referencing our Docket No. MM8845US.

Respectfully submitted,

Date: September 4, 2007

  
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